

FIG. 1

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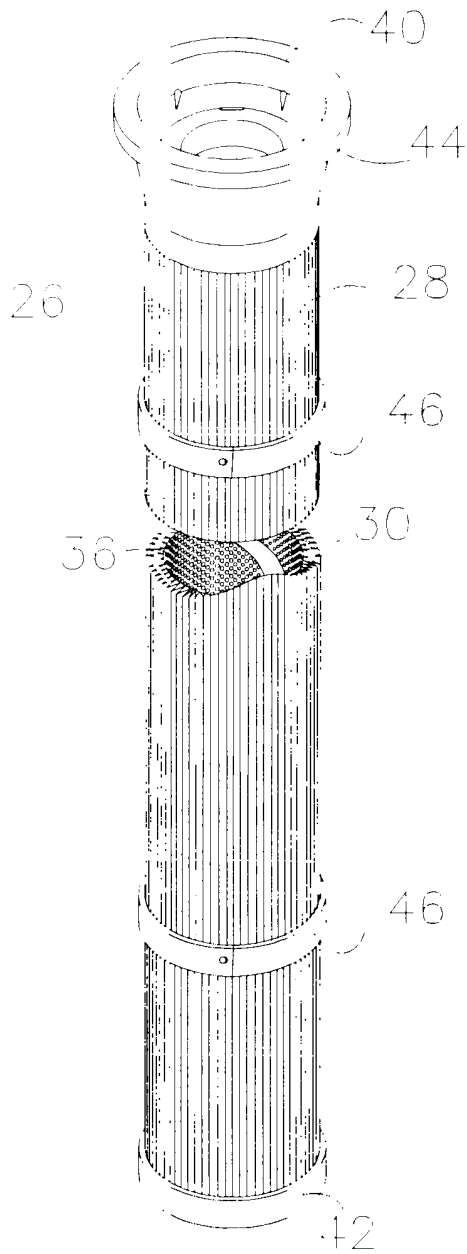


FIG. 2

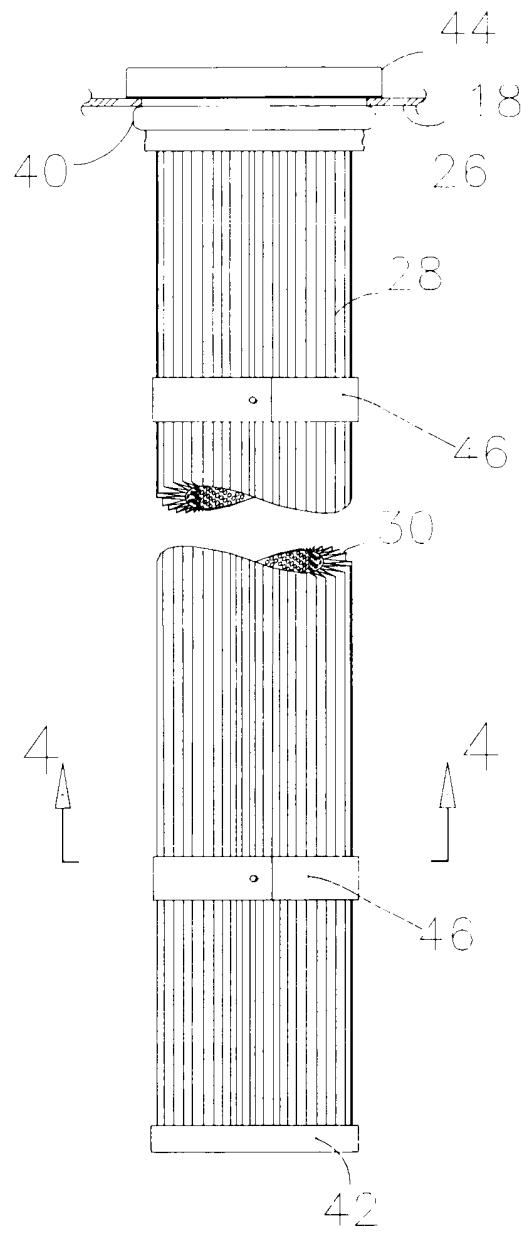


FIG. 3

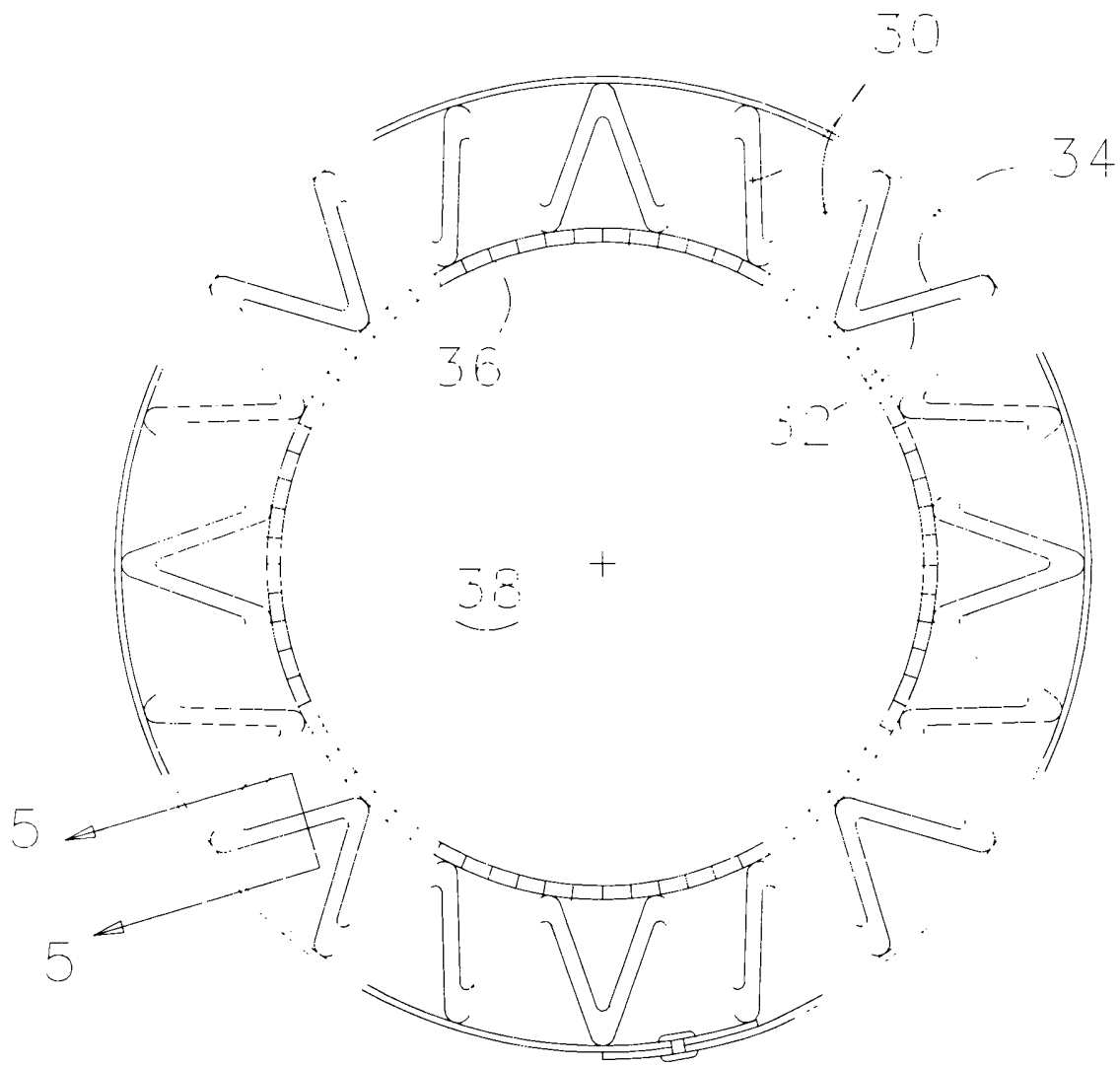


FIG. 4



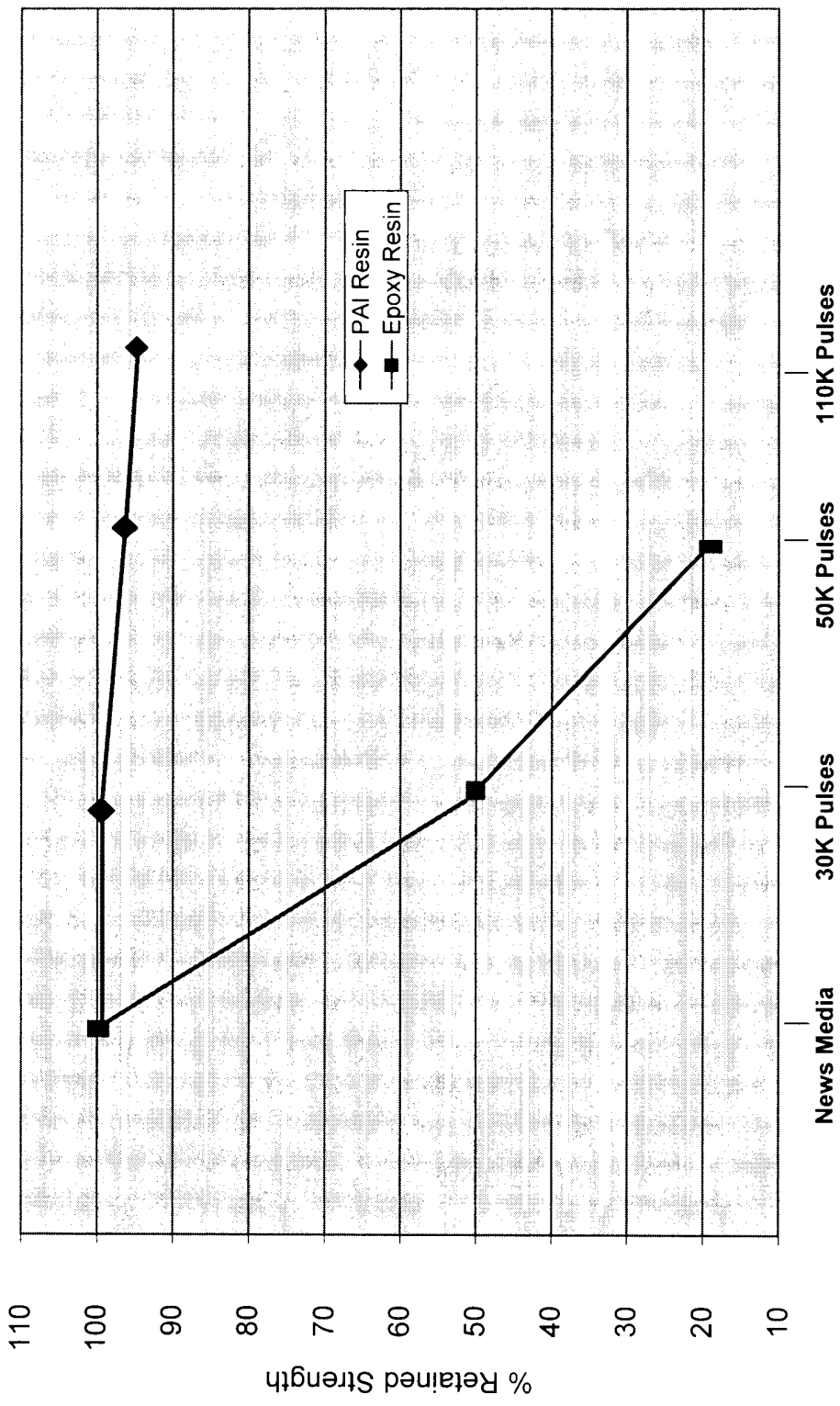
Fig. 5



Fig. 6

1 400000 2 7 3 00 4 00000000

Combined Average MD and XMD Retained Tensile Strength of PAI Resin Treated Aramid
Versus Epoxy Resin Treatment Aramid

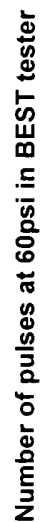


Note: Epoxy resin treated substrate experienced complete filter failure prior to 110,000 pulses

FIG. 7

Figure 1 consists of 12 sub-graphs labeled (a) through (l), each showing the growth of *E. coli* O157:H7 in ground beef under different treatment conditions. The y-axis for all graphs is \log_{10} CFU/g, ranging from 0 to 10. The x-axis for all graphs is time in hours, ranging from 0 to 120. The graphs show various growth curves, with some treatments showing significant growth inhibition compared to the control.

- (a) Control: Shows a steady increase in \log_{10} CFU/g from approximately 2.5 to 10.0 over 120 hours.
- (b) Salt: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (c) Acetic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (d) Lactic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (e) Citric acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (f) Malic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (g) Succinic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (h) Tartaric acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (i) Fumaric acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (j) Gluconic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (k) Mannonic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.
- (l) Galactonic acid: Shows a slight increase in \log_{10} CFU/g from approximately 2.5 to 3.5 over 120 hours.



Note: Epoxy resin substrate experienced complete filter failure prior to 110,000 pulses.

FIG. 8